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CLAIMS

I claim:

1. (Currently amended) Device ~~(110, 210, 310, 510)~~ for ~~the~~ automated detection of mountings among animals, intended to be worn by an animal ~~(100), characterized by the fact that it includes~~ , said device comprising:

a fastener ~~(105, 505)~~ positioned on said animal~~;~~;

a means ~~of detection (140) of~~ for detecting a mounting attempt by said animal~~,~~ on a female animal ~~(120),~~; and

a means ~~of identification (145, 180, 345, 580) of~~ for identifying an electronic tag placed in ~~the~~ an organ ~~organism~~ of ~~the~~ said female animal, activated by said means ~~of detection and/~~ for detecting or means ~~of identification of the female animal~~ for identifying or both by processing an image of at least a part of ~~the~~ said female animal activated by said means ~~of detection~~ for detecting.

2. (Currently amended) Device as per claim 1, ~~characterized by the fact that it includes a~~ further comprising:

means ~~of identification (145, 180, 345, 580) of~~ for identifying an electronic tag placed in ~~the organism~~ an organ of ~~the~~ said female animal, activated by said means ~~of detection~~ for detecting.

3. (Currently amended) Device as per claim 2, ~~characterized by the fact that~~ wherein said electronic tag is placed in ~~the~~ a digestive tract of ~~the~~ said female animal.

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4. (Currently amended) Device as per ~~any of claims 2 or 3, characterized by the fact that it includes~~ Claim 1, further comprising:

a memory of identifications of excluded electronic tags~~:~~ and

~~a~~ means ~~of exclusion of~~ for excluding identifications of electronic tags capable of not taking into account identifications of tags stored in said memory.

5. (Currently amended) Device as per ~~any of claims 2 to 4, characterized by the fact that the~~ Claim 1, wherein said means ~~of detection~~ for detecting and ~~the~~ said means ~~of identification~~ identifying are ~~capable~~ comprised of emitting a magnetic field energizing ~~the~~ said electronic tag placed in ~~the organism of the~~ said organ of said female animal to energize said electronic tag.

6. (Currently amended) Device as per ~~any of claims 2 to 5, characterized by the fact that the~~ Claim 1, wherein said means ~~of identification includes~~ for identifying comprises a means for writing onto ~~the~~ said electronic tag ~~placed in the organism of the female animal~~.

7. (Currently amended) Device as per ~~any of the claims 2 to 6, characterized by the fact that the~~ Claim 1, wherein said fastener ~~includes~~ comprises:

a harness positioning ~~— at the moment of~~ during a mounting attempt, ~~an antenna of the~~ said means ~~of identification (145, 180, 345, 580) of an electronic tag placed in the organism of the female animal~~ for identifying having an antenna in place to receive signals emitted by said electronic tag ~~placed in the organism of the female animal~~.

8. (Currently amended) Device as per ~~any of the claims 1 to 7, characterized by the fact that the~~ Claim 1, wherein said means ~~of detection (140) of~~ for detecting mounting attempts ~~includes~~ is comprised of a verticality sensor ~~(740E)~~.

9. (Currently amended) Device as per ~~any of the claims 1 to 8, characterized by the fact that the~~ Claim 1, wherein said means ~~of detection (140) of~~ for detecting mounting attempts ~~includes~~ comprises a sensor for the pressure ~~(740A)~~ exerted on ~~the~~ a back of ~~the~~ said female animal, said pressure sensor being placed under ~~the~~ a belly of the animal ~~(100)~~ wearing the device.

10. (Currently amended) Device as per ~~any of the claims 1 to 9, characterized by the fact that the~~ Claim 1, wherein said means ~~of detection (140) of~~ for detecting mounting attempts ~~includes~~ comprises a temperature sensor ~~(740B)~~, said temperature sensor being placed under the belly of the animal ~~(100)~~ wearing the device.

11. (Currently amended) Device as per ~~any of the claims 1 to 10, characterized by the fact that the~~ Claim 1, wherein said means ~~of detection (140) of~~ for detecting mounting attempts ~~includes~~ comprises a motion sensor ~~(740D) [sensing the movements]~~, movements of the animal ~~(100)~~ wearing the device being sensed.

12. (Currently amended) Device as per ~~any of the claims 1 to 11, characterized by the fact that it includes~~ Claim 1, further comprising:

a means ~~of identification of the~~ for identifying said female animal by processing an image of at least one part of ~~the~~ said female animal, said means ~~of identification~~ for identifying said female by processing being activated by said means ~~of detection~~ for detecting.

13. (Currently amended) Device as per ~~any of the claims 1 to 12, characterized by the fact that it includes a~~ Claim 1, further comprising:

means for determining ~~the~~ time and date ~~(170, 570)~~ of each mounting attempt.

14. (Currently amended) Device as per ~~any of the claims 1 to 13, characterized by the fact that it includes a~~ Claim 1, further comprising:

means ~~of transmission (145, 150) of~~ for transmitting at least one part of the identifications of the female animals identified by ~~the~~ said means ~~of identification~~ for identifying.

15. (Currently amended) Device as per ~~any of the claims 1 to 14, characterized by the fact that it includes a~~ Claim 1, further comprising:

means for processing ~~the~~ identifications of ~~the~~ female animals capable of determining at least one result of statistical analysis of mounting attempts for each female animal.

16. (Currently amended) Process as per claim 15, ~~characterized by the fact that the~~ wherein said means for processing the identifications of female animals is capable of determining said result bases on a calibration of ~~the~~ libido of at least one animal of said fraction of the animals ~~in the herd~~.

17. (Currently amended) Device for ~~the~~ automated detection of mountings between animals, ~~intended to be~~ being placed in ~~the organism~~ an organ of a female animal, ~~characterized by the fact that it includes~~ said device comprising:

~~a~~ means ~~of detection (140) of~~ for detecting a mounting attempt on said female animal by another animal,

~~a~~ means for processing said mounting attempt, and

~~a~~ means for transmitting ~~the~~ a result of ~~the~~ processing.

18. (Currently amended) Process of automated detection of mountings among animals, ~~characterized by the fact that it includes~~ comprising the steps of:

installing a means for detecting mounting attempts on a female animal and a means for identifying said female animal ~~a step of installation (400),~~ on a fraction of ~~the~~ animals ~~of the~~ in a herd, each animal ~~(100)~~ of said fraction being liable to make said mounting attempts~~, of a means for detecting mounting attempts (140, 345) on a female animal and of a means for identifying (145, 180, 345, 580) said female animal,~~;

~~a step of detection (430) of~~ detecting a mounting attempt by said each animal~~,~~ on a female animal ~~(120)~~; and

identifying, in ~~the~~ event of detection of a mounting attempt, ~~a step of identification (435) of~~ an electronic tag placed in ~~the organism~~ an organ of ~~the~~ a detected female animal or ~~of identification of~~ identifying ~~the~~ said detected female animal by processing of an image of said detected female animal.

19. (Currently amended) Process as per claim 18, ~~characterized by the fact that, during the~~ wherein said step of ~~identification (435) of~~ identifying an electronic tag placed in the ~~organism~~ organ of ~~the~~ said female animal, is comprised of identifying an electronic tag placed in the ~~organism~~ organ of ~~the~~ said female animal ~~is identified~~.

20. (Currently amended) Process as per ~~any of the claims 18 or 19, characterized by the fact that it includes a step of calibration~~ Claim 18, further comprising the step of:

calibrating ~~(905 to 930) of the~~ libido of at least one animal of said fraction of animals of the herd.

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ABSTRACT OF THE DISCLOSURE

The inventive device ~~(110, 210, 310, 510)~~ for automatically detecting the mating of animals is wearable by an animal ~~(100) and comprises means (105, 505) for fixing.~~ <u>The device includes a fixing</u> to an animal <u>mechanism,</u> ~~means (140) for detecting~~ <u>a detector for</u> an attempt of mating a female animal ~~(120) by said~~ <u>by the</u> animal <u>with the fixing mechanism,</u> ~~means (145, 180, 345, 580) for identifying~~ <u>and an identifier for</u> an electronic label which is introduced in the body of ~~said~~ <u>the</u> female animal and actuated by ~~said detection means~~ <u>the detector</u> and/or by the female animal identification ~~means~~ <u>device</u> by processing the image of at least one part of the female animal triggered by ~~said detection means~~ <u>the detector.</u> ~~In the preferred embodiment, means for identifying said other animal comprises means for communicating~~ <u>The identifier includes a communicator</u> with ~~the~~ <u>an</u> electronic label ~~(130)~~ carried by a female animal ~~conspecific with the animal triggered by said detection means. In one of the embodiments, communications means is~~ <u>The communicator can read</u> ~~embodied in such a way that it reads~~ the electronic label <u>identifier</u> of each female animal which ~~said~~ <u>the</u> animal attempts to mate ~~and storing means (160) memorises each displayed identifier. In the other embodiment, communication means is.~~ <u>The communication can also be</u> provided with a device for storing representative information on the attempted mating in the random access memory of the electronic label ~~carried by the conspecific female animal.~~

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